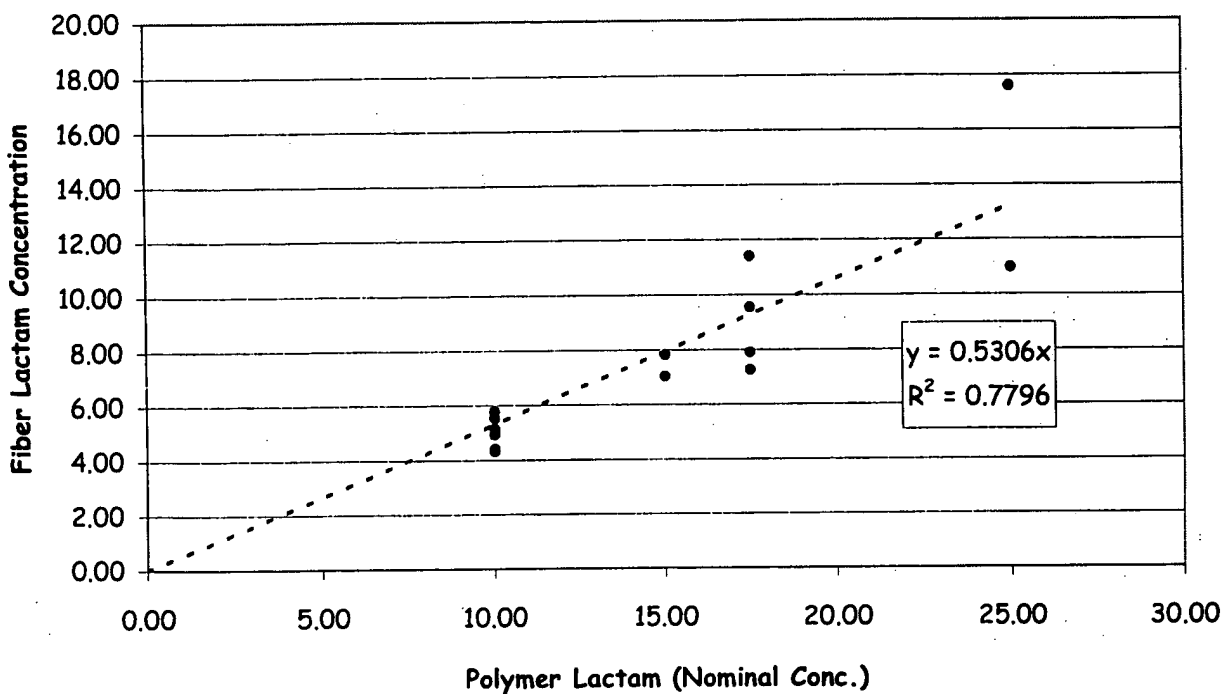


Fiber Lactam vs Original Polym r Lactam

Fig. ①



Onset of Melting vs Lactam Concentration

25 denier bundle

Fig. ②

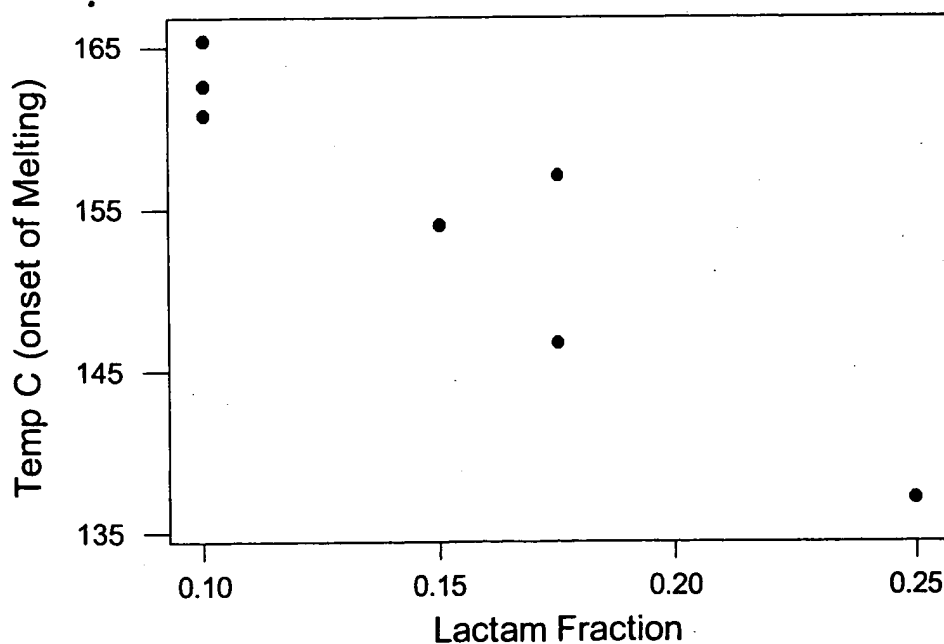
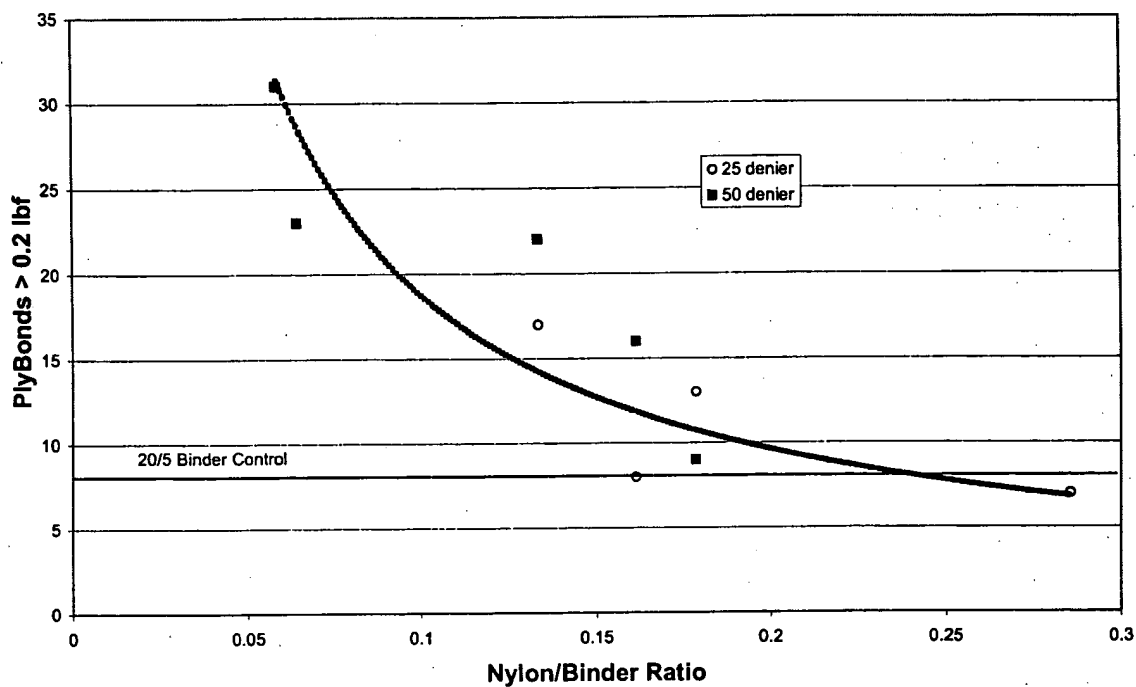


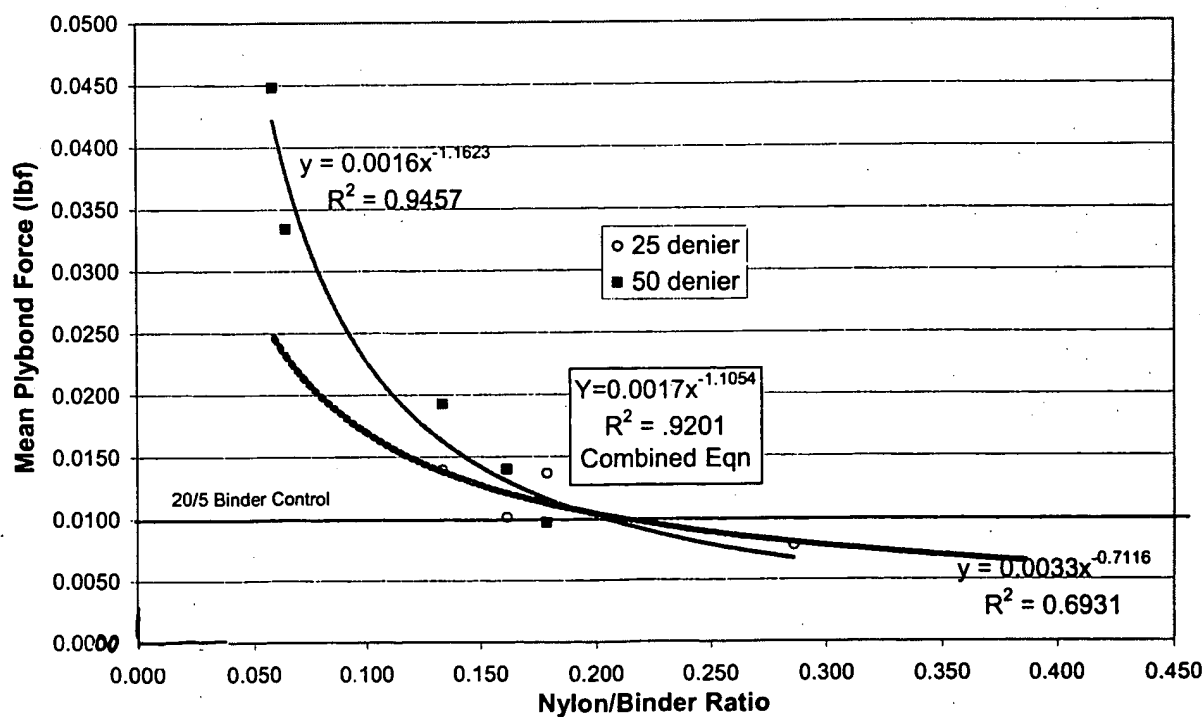
Fig
③

PlyBonds vs Nylon/Binder Ratio



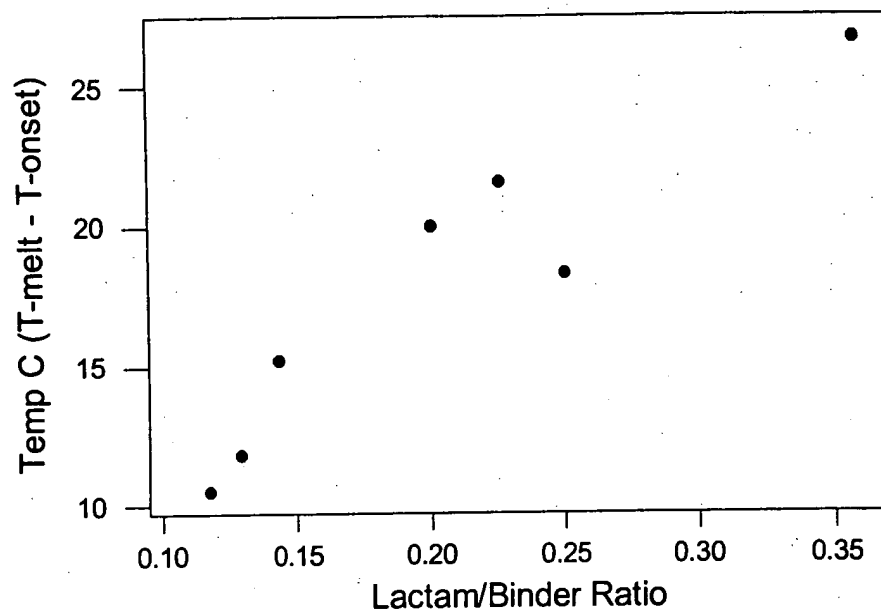
Mean Force vs Nylon/Binder Ratio
By Bundle Denier

Fig
④



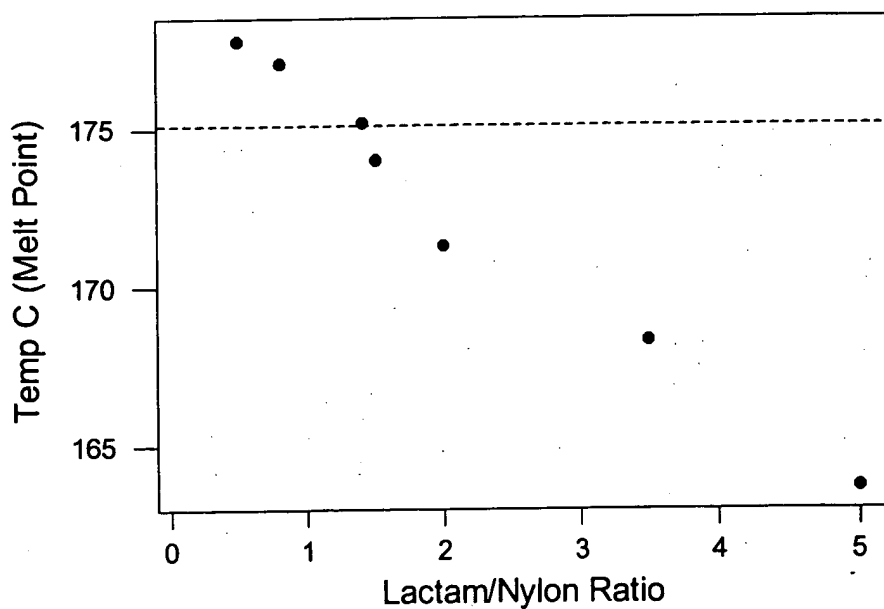
Binder Phase Melt Point (Sharpness) vs Lactam/Binder Ratio
25 denier bundle

Fig
(5)



Binder Phase Melt Point vs Lactam/Nylon Ratio
25 denier bundle

Fig
(6)



Mixture Contour Plot of Onset

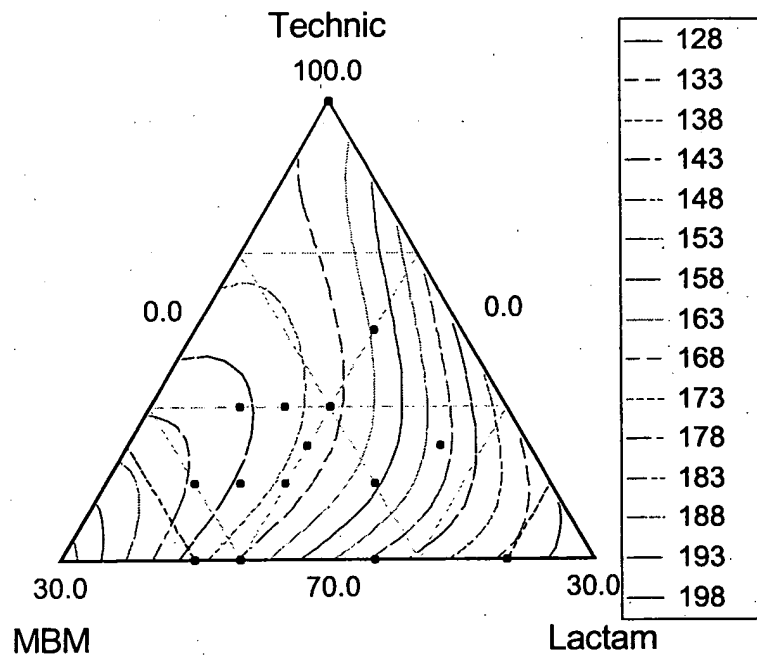


Fig. 7

Mixture Contour Plot of 1st Tm

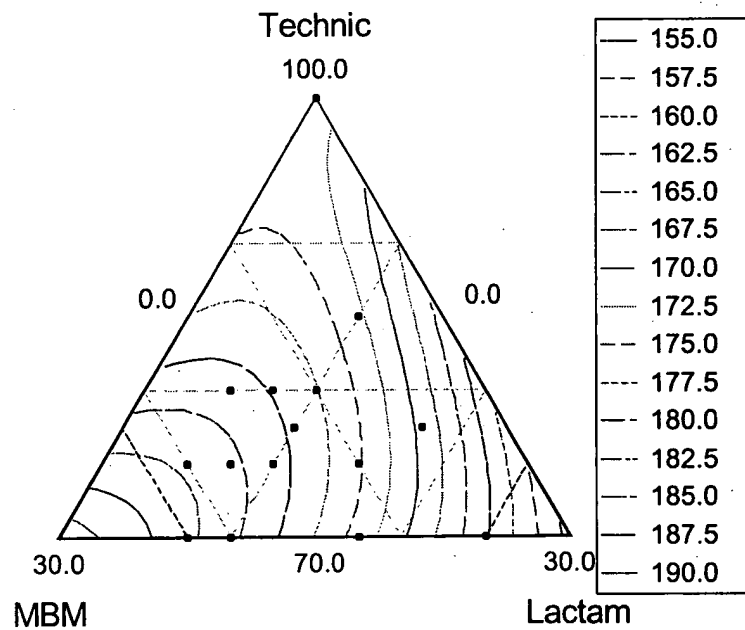


Fig. 8

Mixture Contour 1st T(melt) - T(onset)

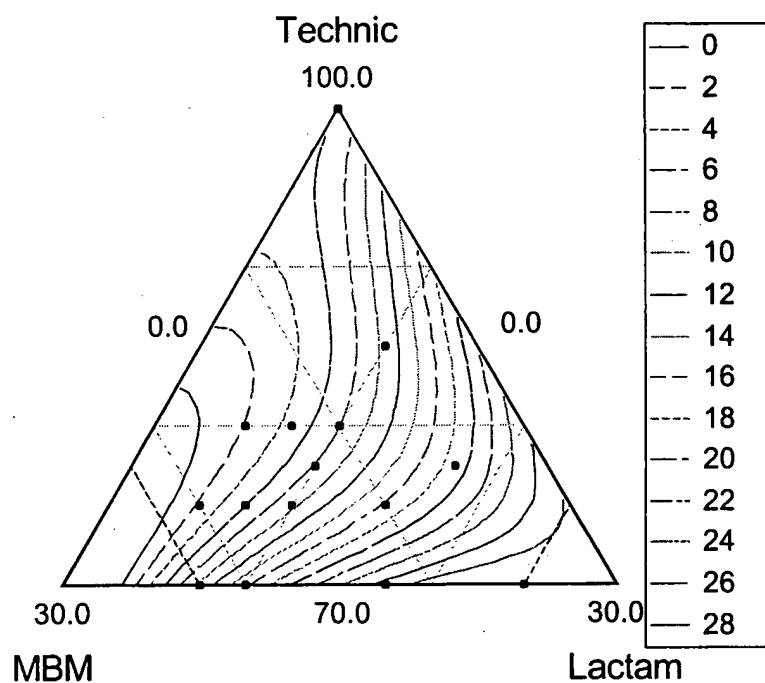


Fig. 9

Mixture Contour Plot of 2nd T_m

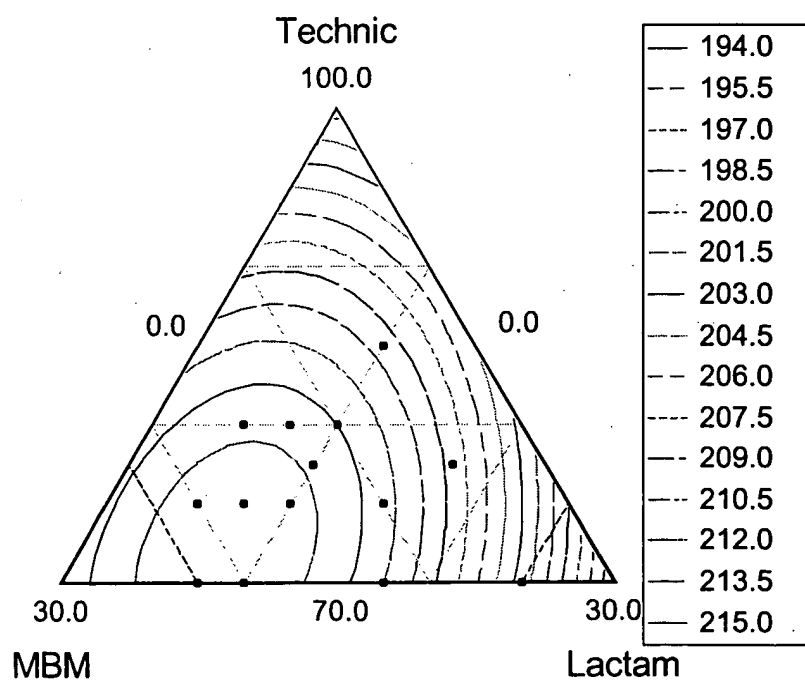


Fig. 10

Mixture Contour Plot of Strain

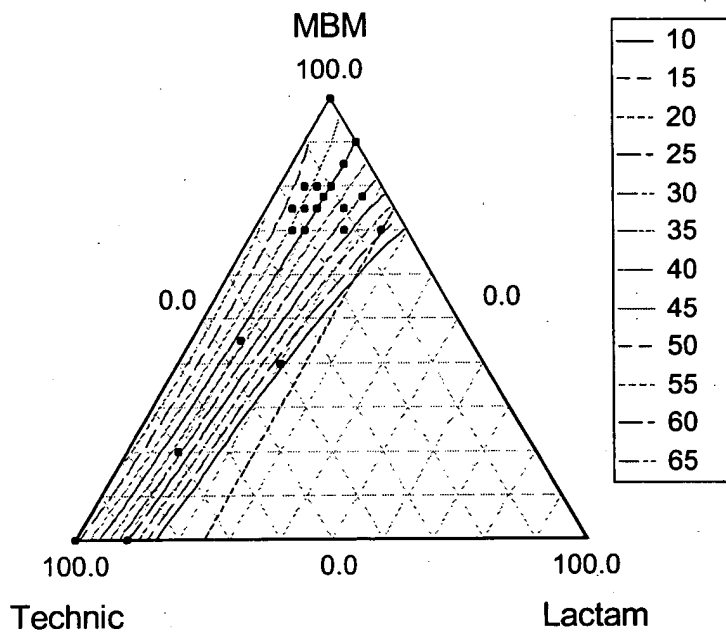


Fig.11

Mixture Contour Plot of Tenacity

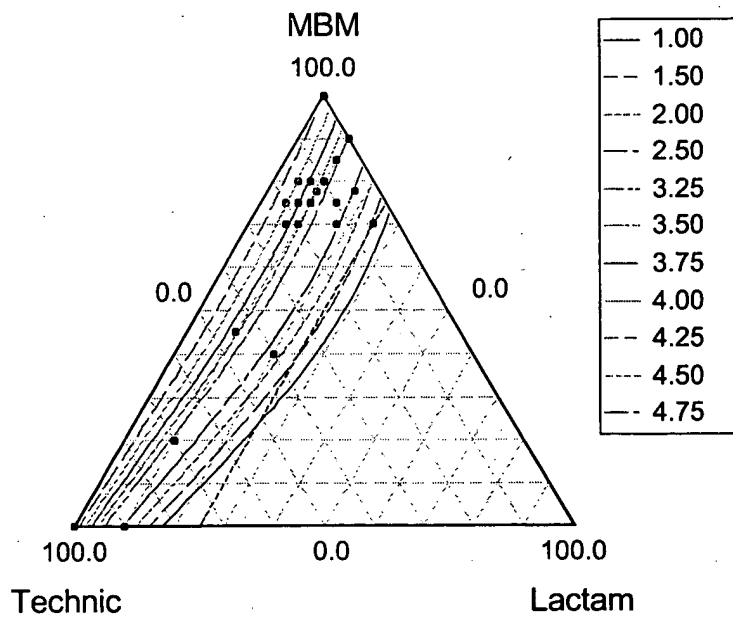


Fig.12

Onset of Melting Temp for Technic Phase vs Lactam Conc.

Average Onset Values (C)

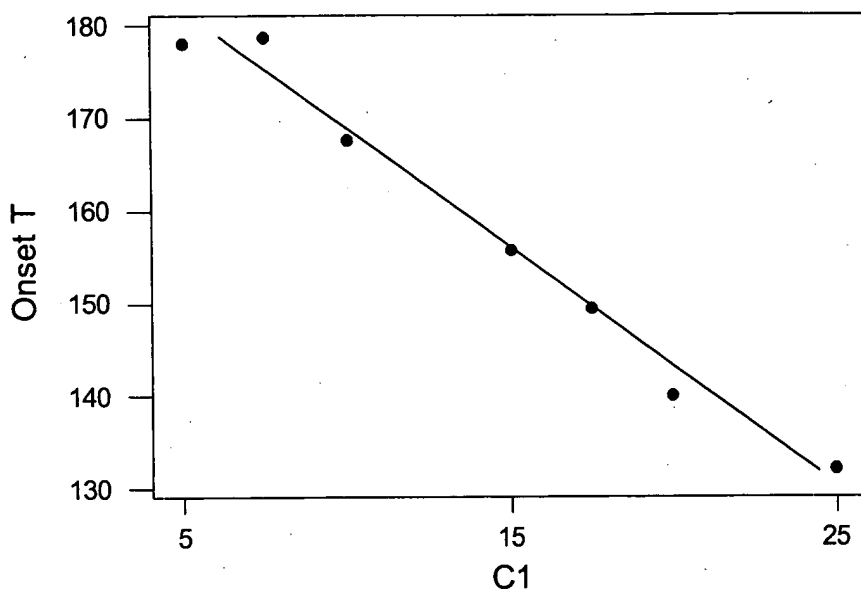


Fig.13

Melting Temp for Technic Phase vs Lactam Conc/Nylon 6 Ratio.

(Degree C)

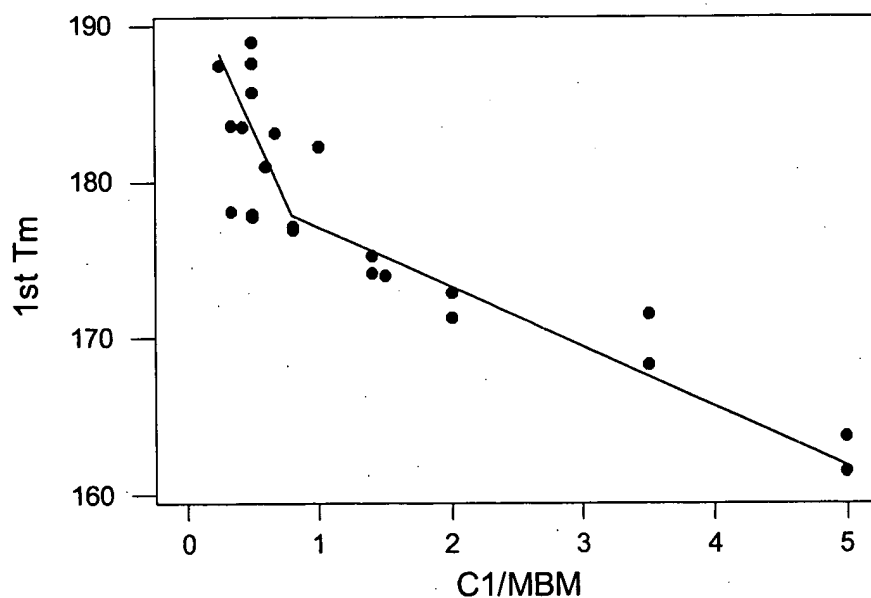


Fig.14

Temp(Melt) - Temp(Onset) vs Lactam/Technic Ratio
(Degree C)

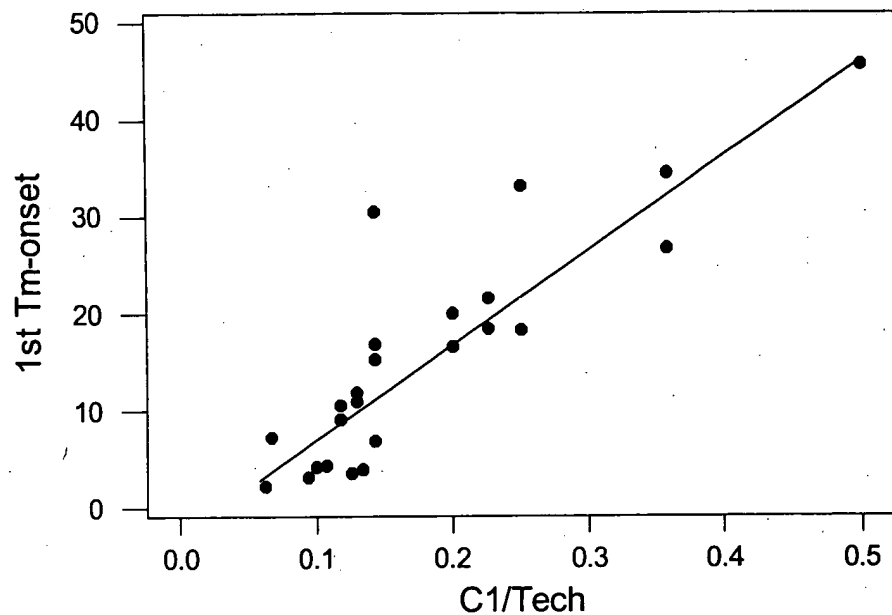


Fig.15

Binder Fiber Tenacity (g/den) vs Lactam Concentration(%)

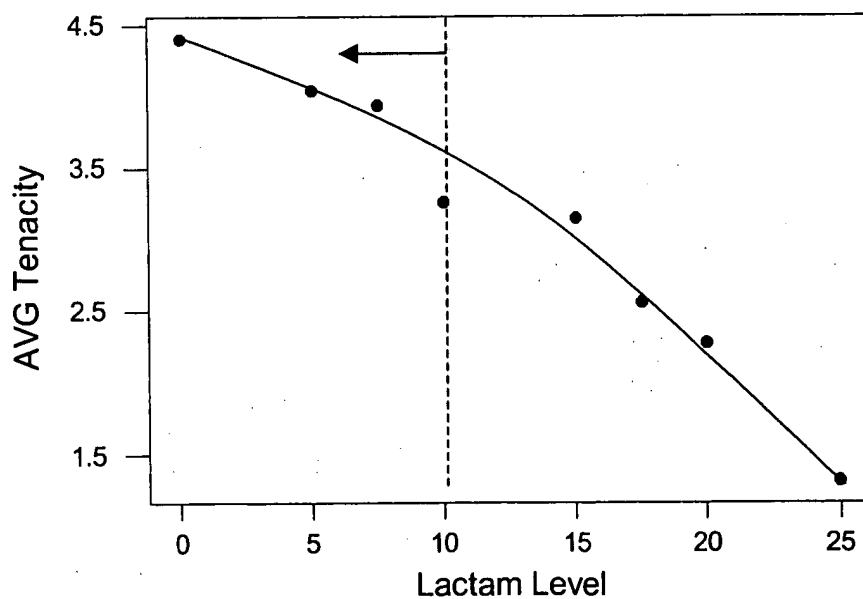


Fig.16

Binder Alloy - Melt Temperature Study
Tenacity vs Melt Temperature
(70/25/5 - Tech/N-6/Lactam)

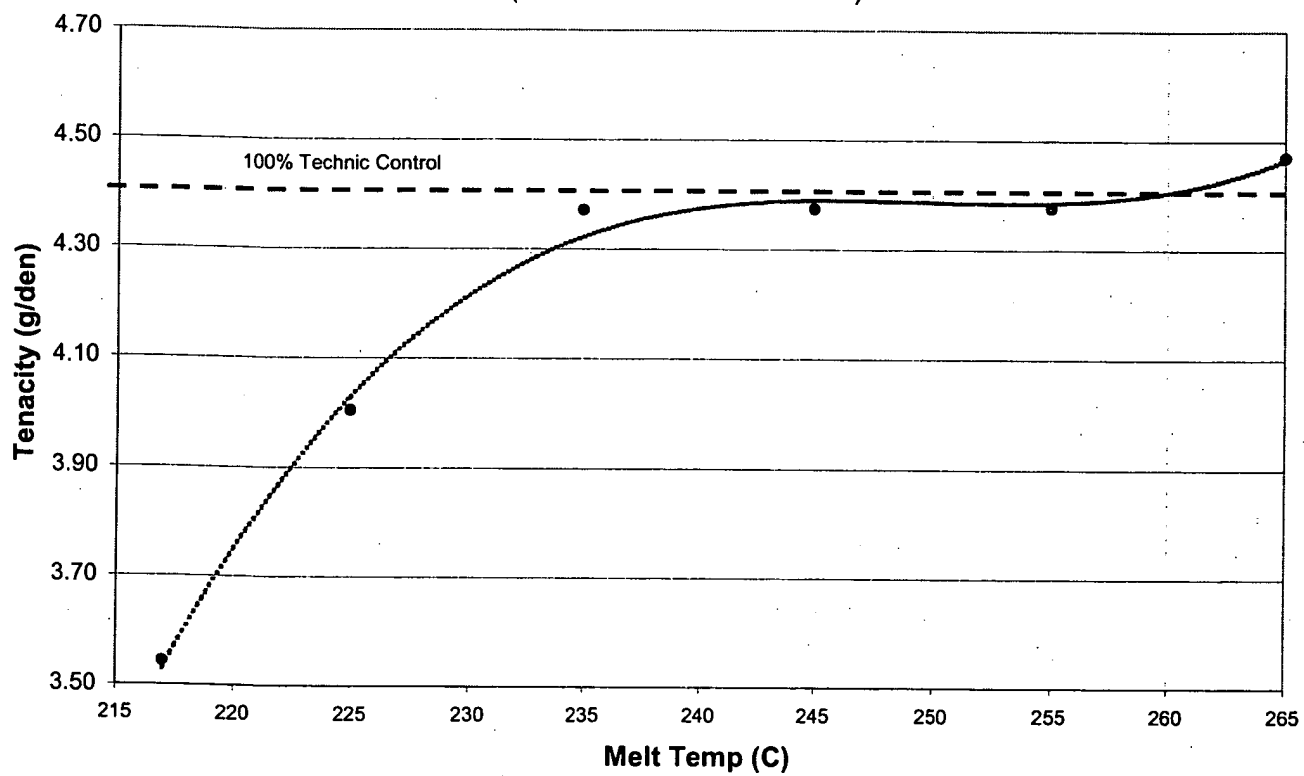


Fig. 17

Fig 18

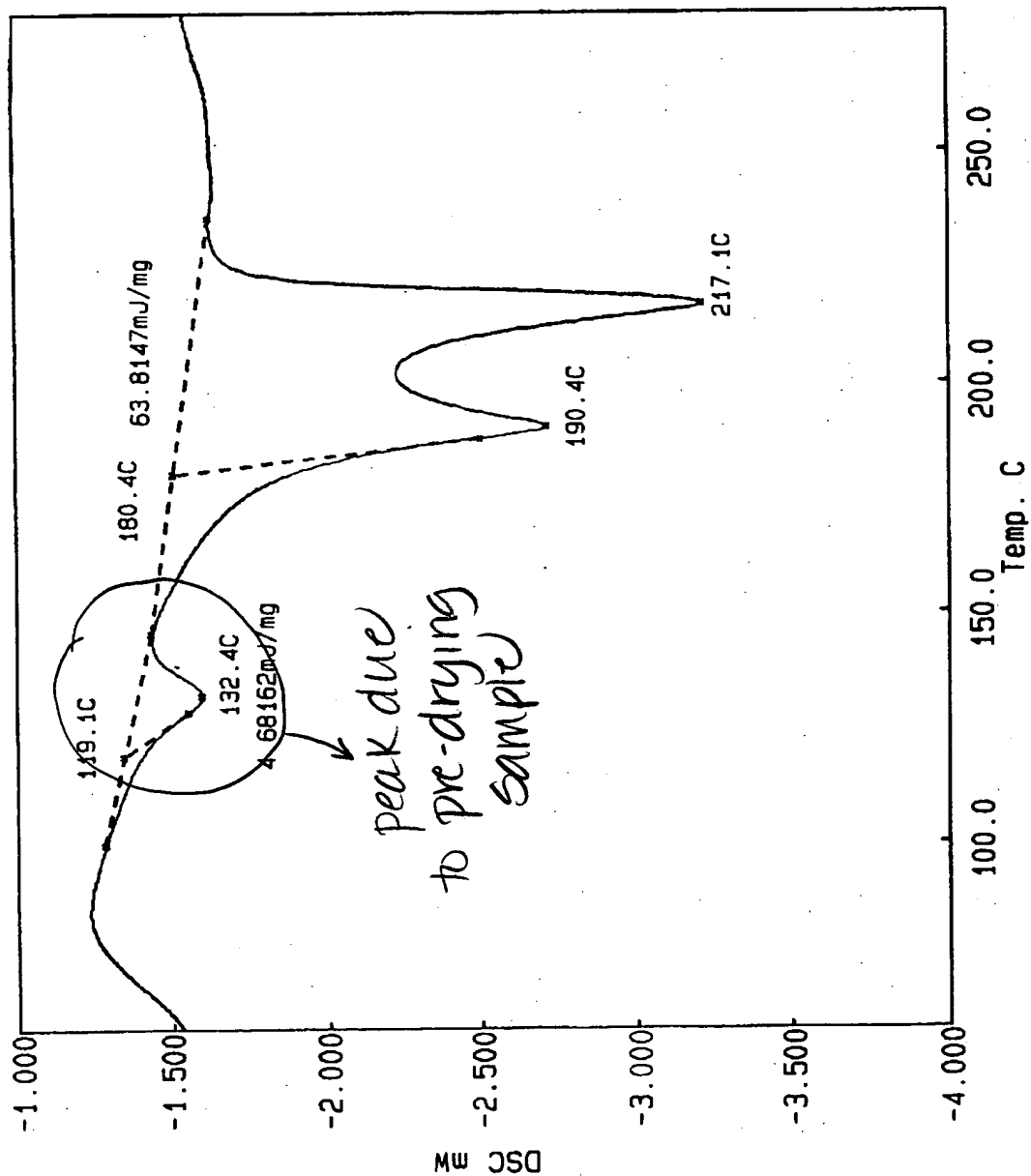
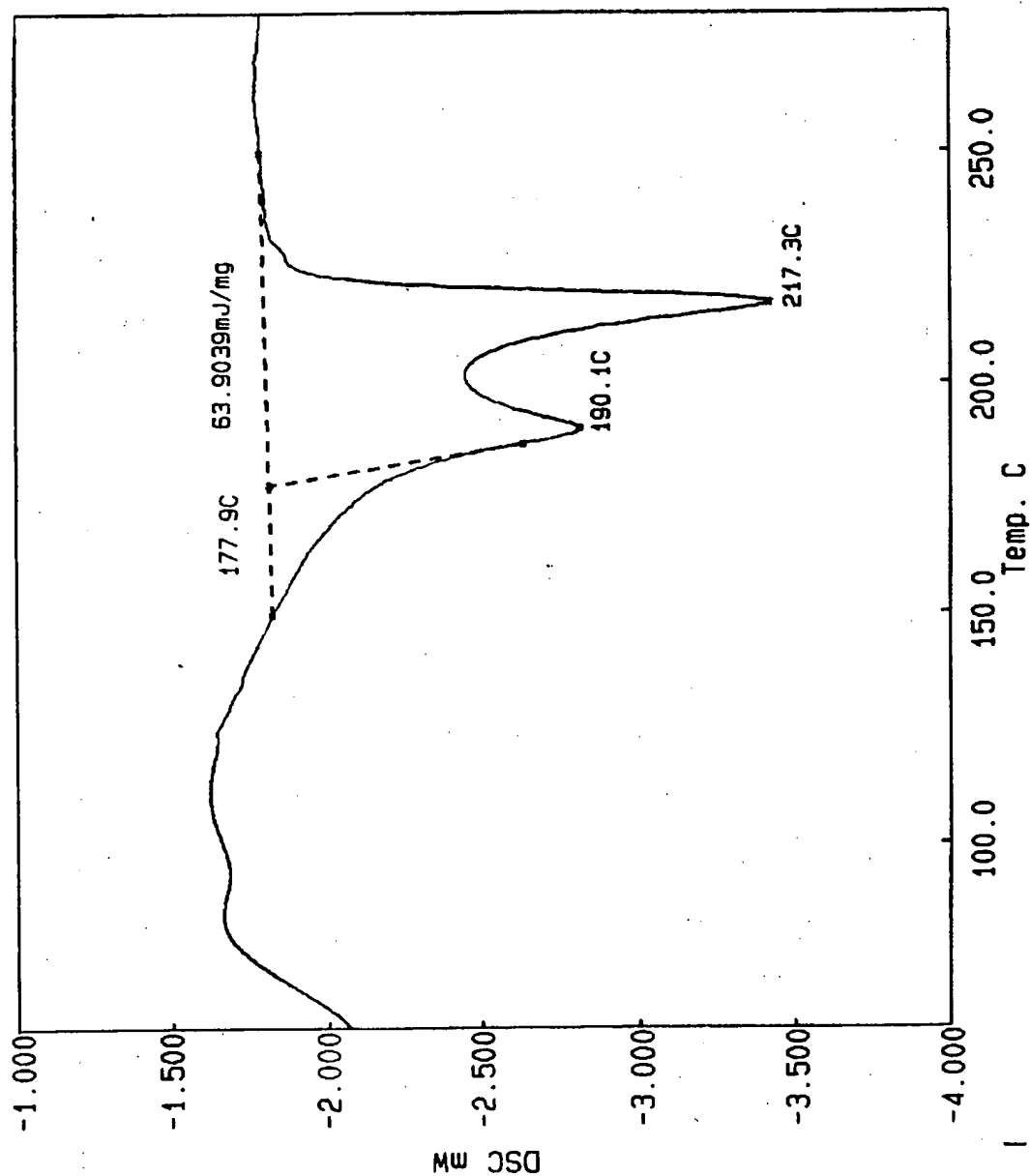


Fig. 19



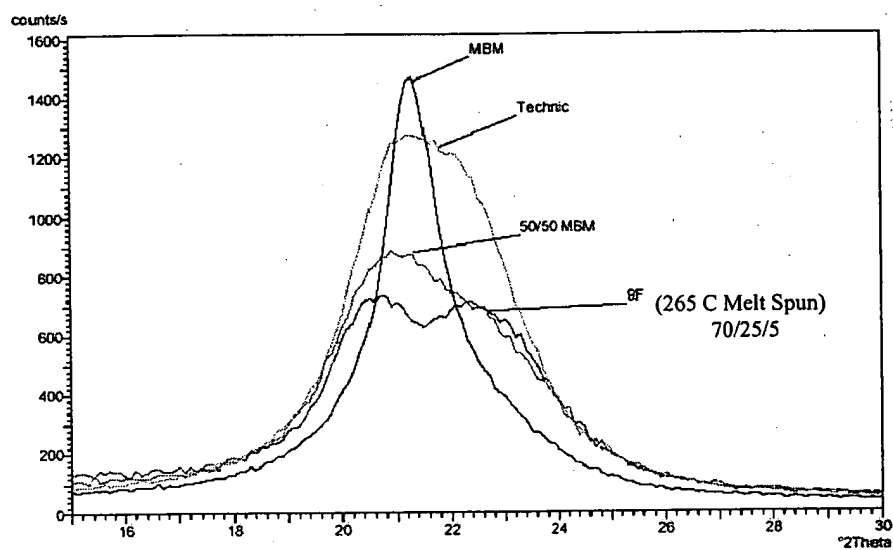


Fig. 20

Binder Alloy Project PD-242

Lactam Effect on UE - at 255°C (Tech/MBM Ratio = 2.8)

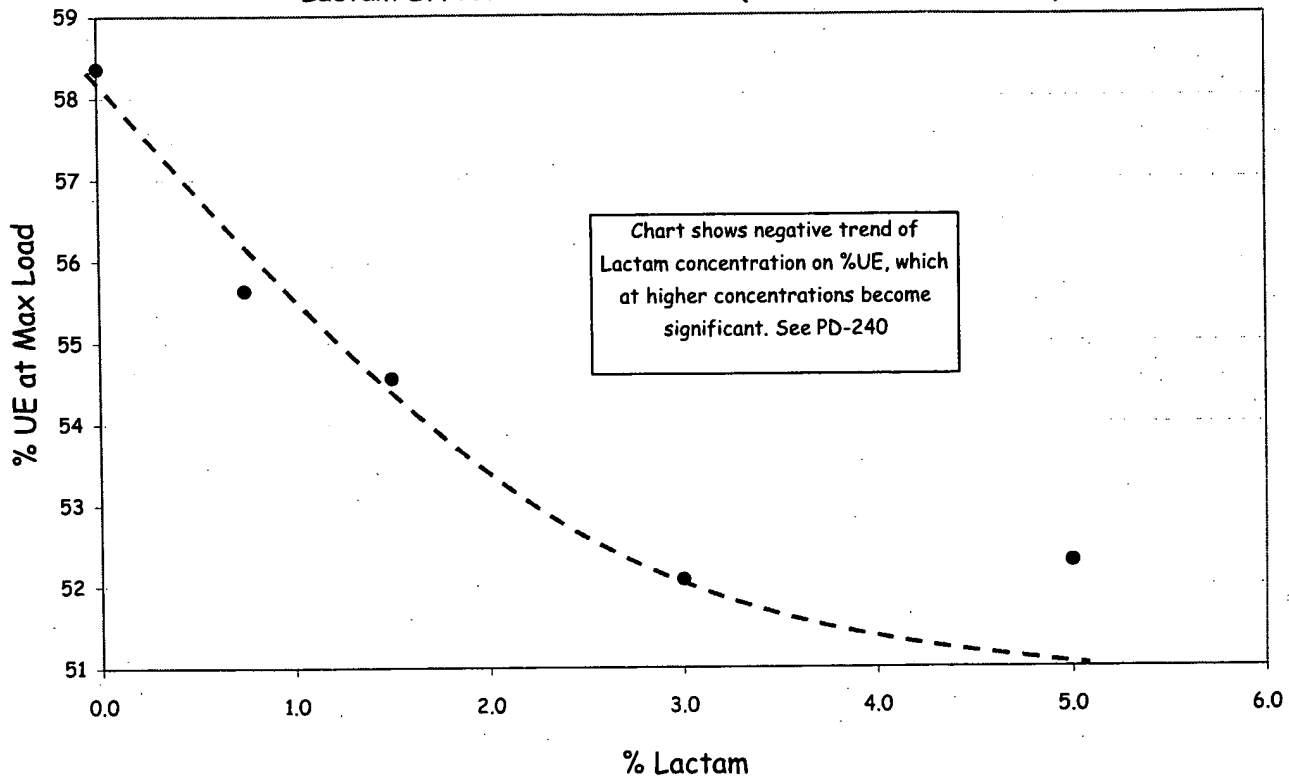


Fig. 21

Binder Alloy Project PD-242

Lactam Effect on Tenacity - at 255°C (Tech/MBM Ratio = 2.8)

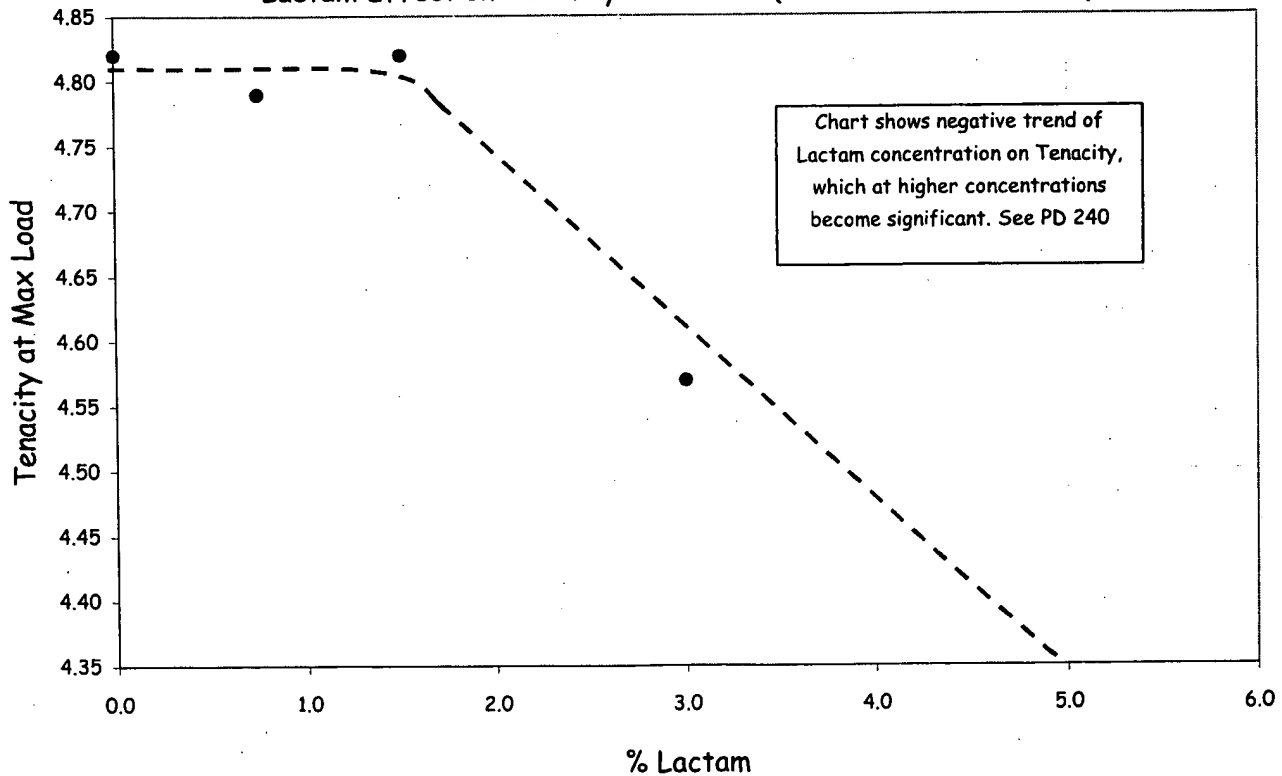


Fig. 22

Binder Alloy Project PD-242
Temp Effect on % UE (Tech/MBM Ratio = 2.8)

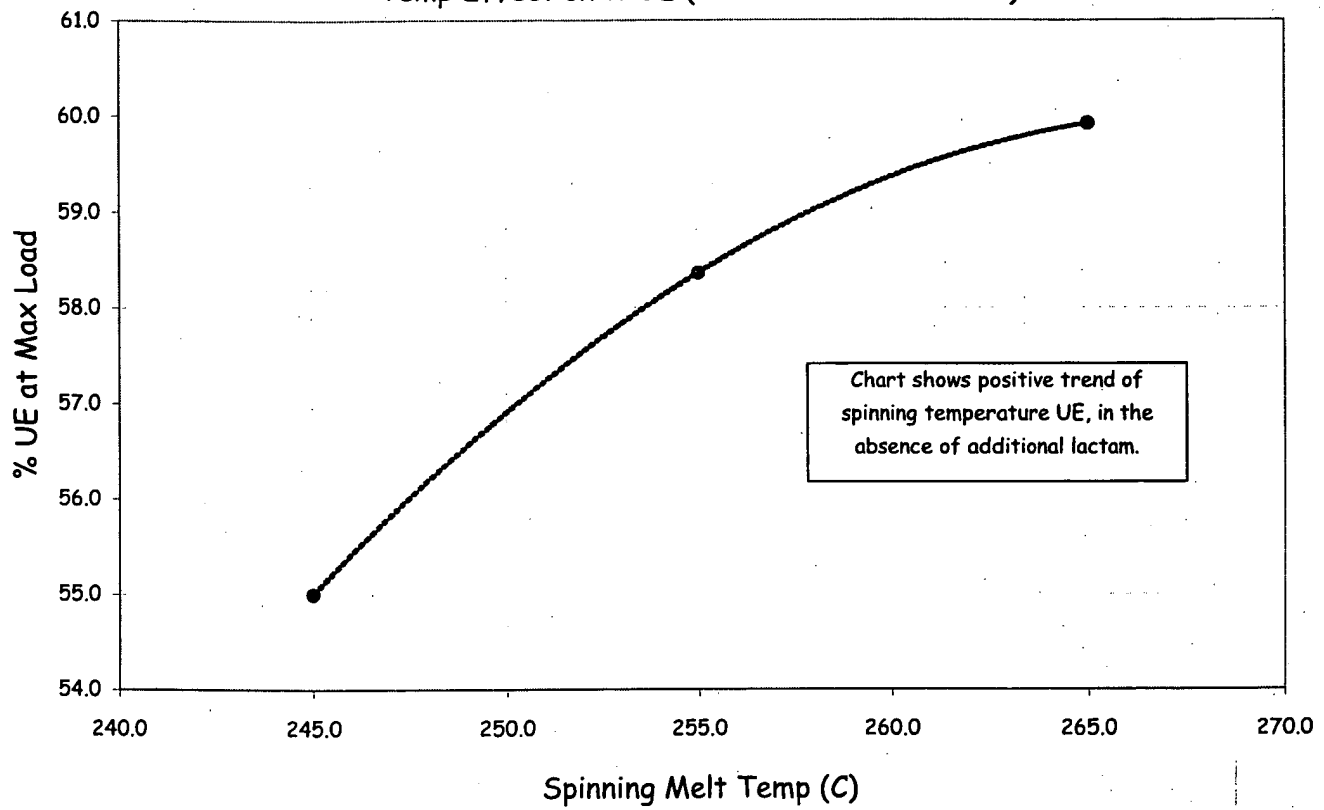


Fig. 23

DSC Heat Scans of Technic/MBM Fibers
(No Additional Lactam)

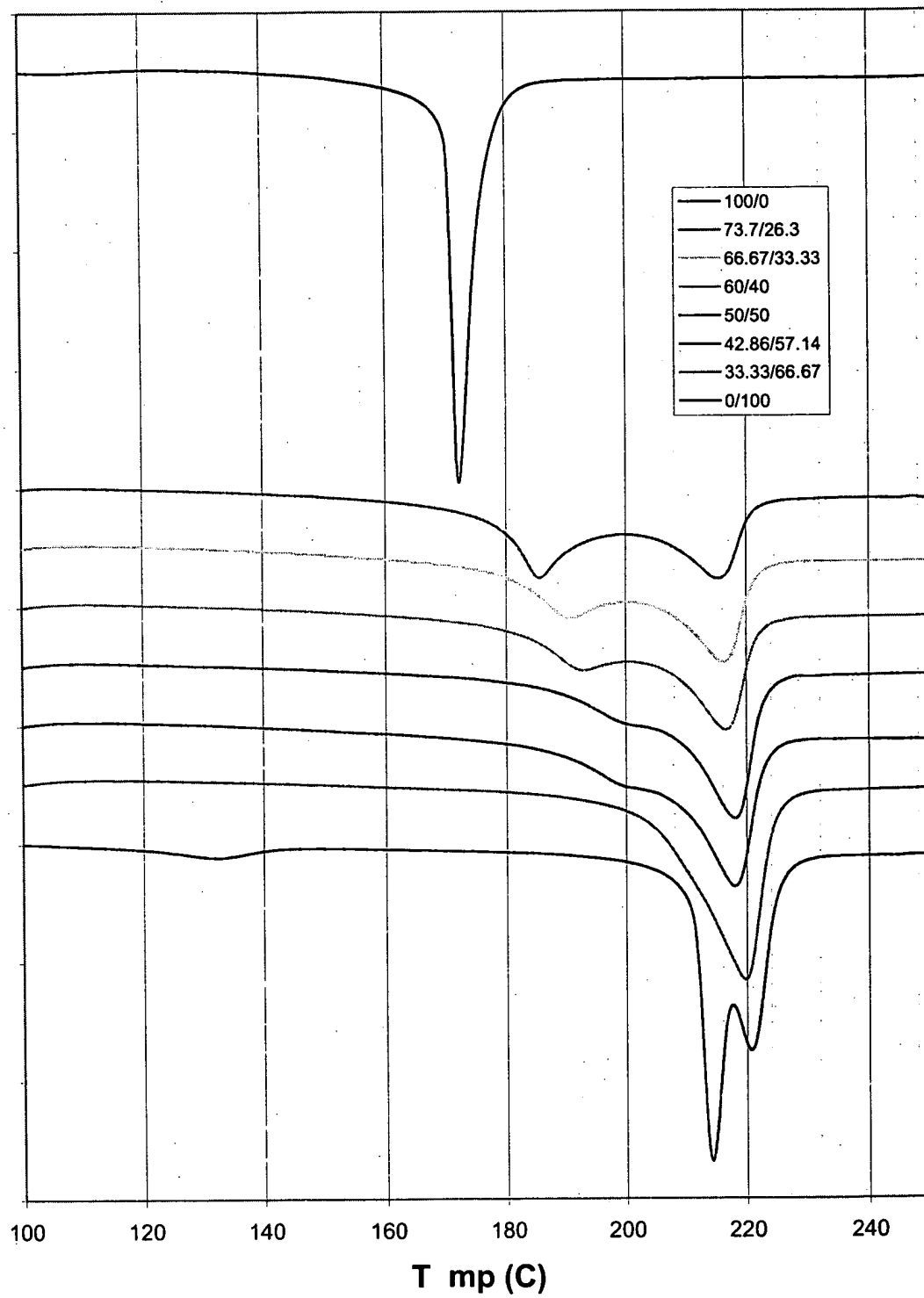


Fig. 24

(Background removed, Normalized)

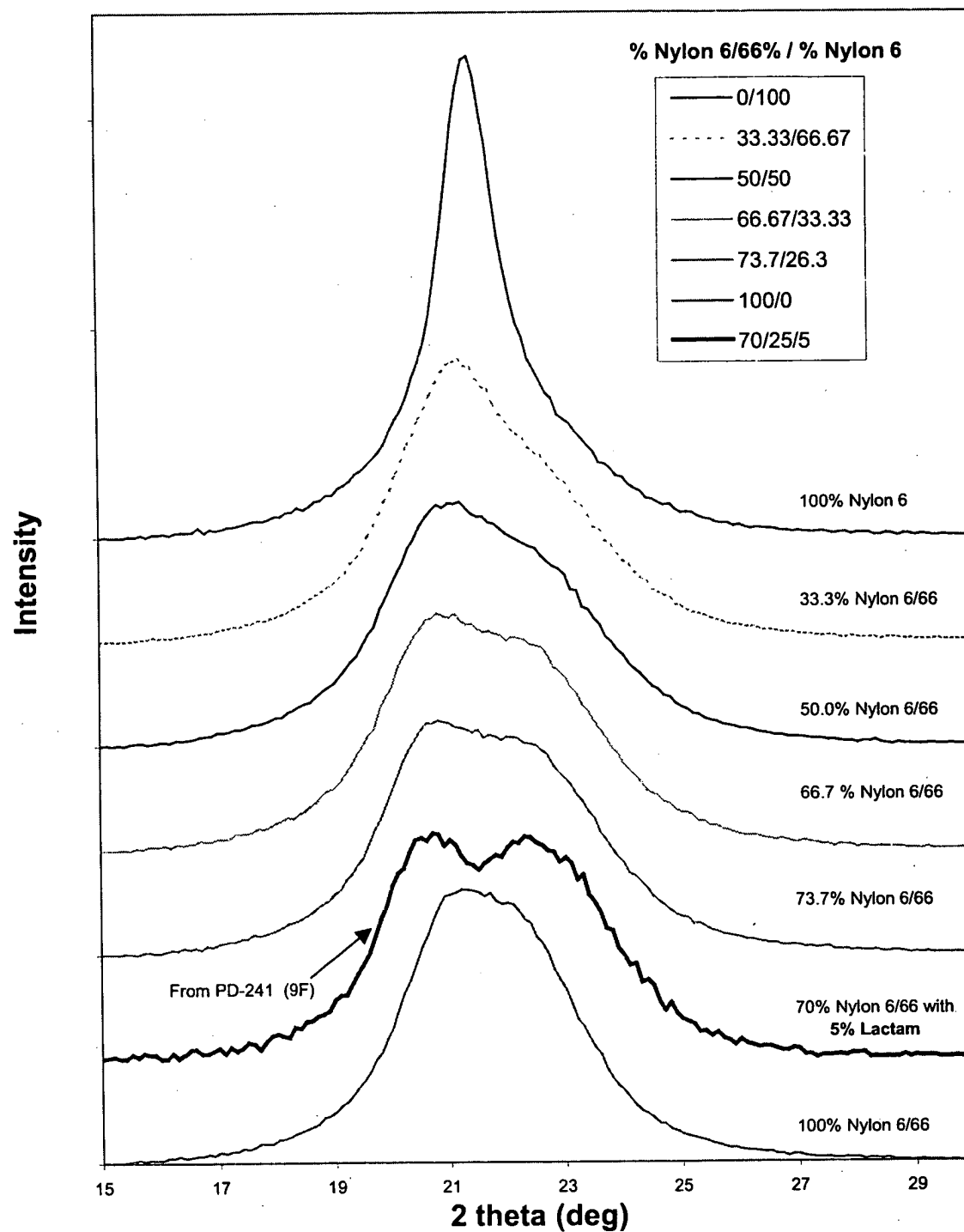
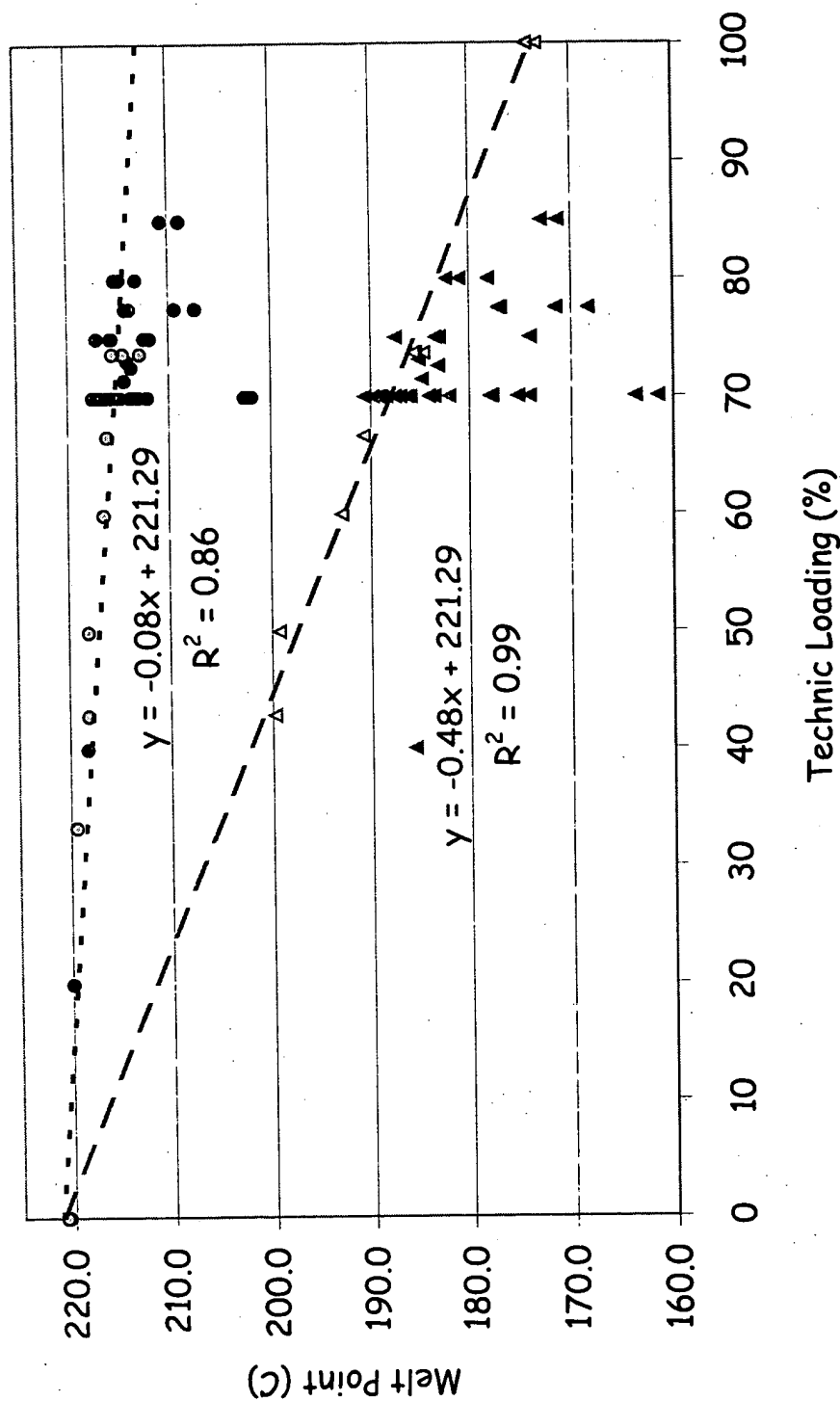


Fig. 25

Melt Point vs Technic Loading

(All Samples)



▲ 1st Tm (Technic) ● 2nd Tm (Nylon 6) ▲ Technic No Lactam ○ Nylon No Lactam

Fig. 26

Melt Point vs Lactam/MBM Ratio
(All Samples)

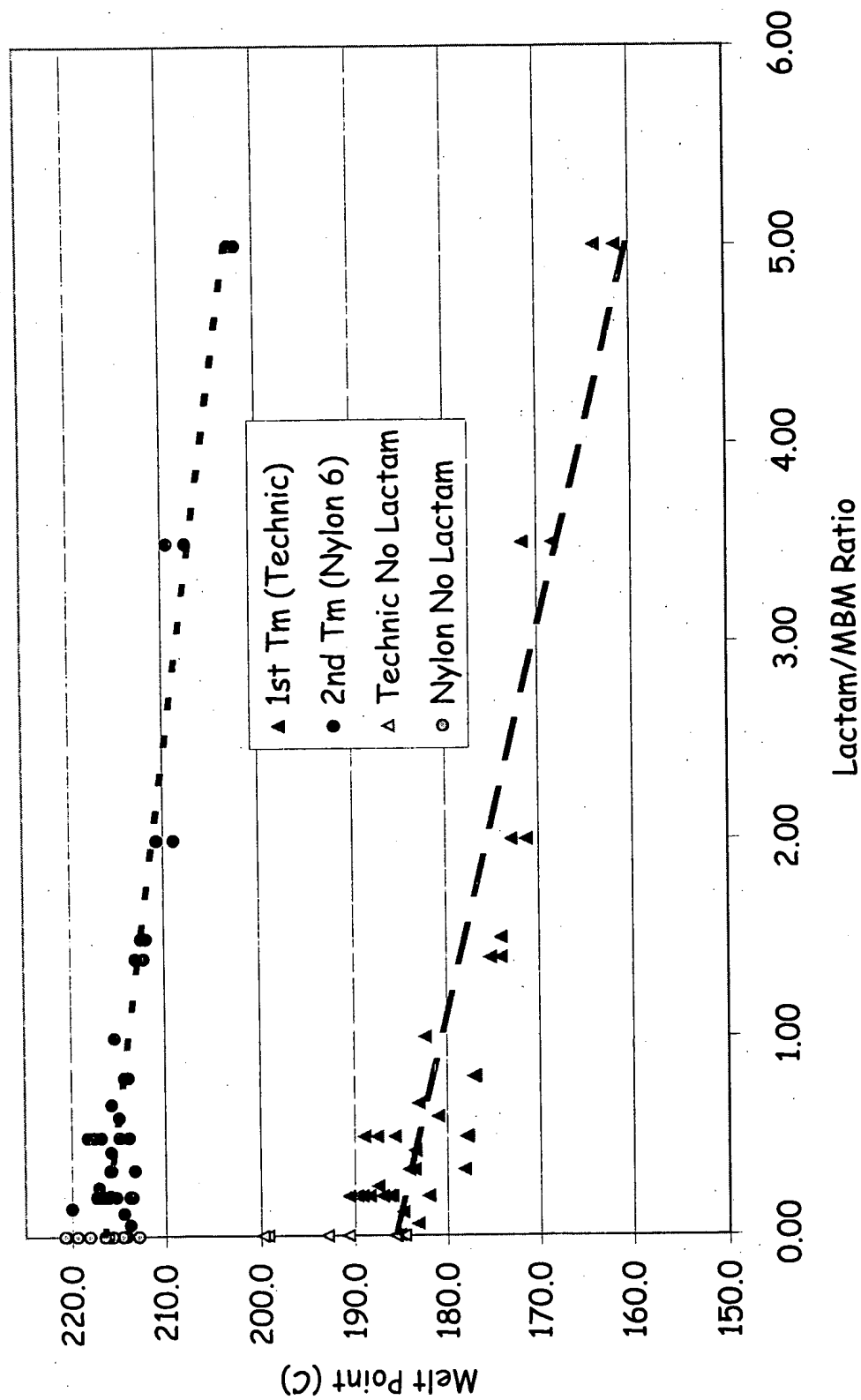


Fig. 27